

Summary

The DNR generates revenue by managing a number of non-timber resources including communication sites, sand and gravel sales, prospecting leases and mining contracts, oil and gas leases, and sales of Special Forest Products (SFP) such as boughs and floral greens. Within the Lake Whatcom planning area, current total annual income from these resources is \$82,908. Revenue is primarily derived from communication site leases (\$79,588 annually) with a smaller portion coming from oil and gas leases. Future income potential from current uses is projected to increase slightly due to increased communication site lease rates and possibly some SFP harvests. Potential income from non-traditional uses is unknown at this time. Map P-1 illustrates the location of current non-timber production sites.

Communication Sites

The DNR has 101 communication sites statewide. These sites, averaging about one acre in size, are facilities (towers, associated equipment and buildings, and access roads) used in cellular communications, microwave transmissions, and television and FM radio broadcasting. This network of sites is also part of the state's emergency management communication system. Twenty-six of the sites have state-owned buildings and towers; the remaining sites have improvements constructed and owned by lessees. Revenue is derived from facility rents, site rents and fees for road use and power.

The Lake Whatcom Landscape Planning area has three communication sites (on state trust lands) in the western portion of the planning area that are referred to as: Galbraith Mountain (T37N, R03E, Section 11), Lookout Mountain (T37N, R4E, Section 17) and South Lookout Mountain (T37N, R4E, Section 19). Galbraith Mountain has eight lessees and generates \$45,030 annually. The Lookout Mountain site has one lessee and generates \$12,500 annually. South Lookout Mountain site has three lessees generating \$22,058 annually. None of the improvements (towers and buildings) on the three sites are owned by DNR (Tables 1, 2 and 3).

Another communication site (T37N, R3E, Section 13) on Lookout Mountain is located on private lands within the planning area. This site hosts a significant Bonneville Power Administration (BPA) communication station. BPA has a permanent easement over DNR-managed roads to access this site. The access road to this site (Lookout Mountain Road) originates in the Sudden Valley area and crosses Section 7, 18, & 19, T37N, R4E and Sections 24 & 13, T37N, R3E. Power for this site is delivered via a cable buried in the road making road maintenance and repairs a significant road management issue for DNR.

Future Revenue Potential: Long-term planning for future revenue is difficult due to the rapidly changing technology used in this industry. Two communication industry developments, satellites and fiber optics, will likely result in long-term changes which reduce the need for current communication sites as they are currently being used. However, the high cost of satellite

communications and the efficiency of the digital radios suggest continued demand for the next 10-20 years. It is also expected that mountain top communication sites will continue to fill a communication need, in one form or another, for the state=s projected population growth.

There should be increases in revenue in the near future at the three communication sites on state trust land in the planning area. The towers and associated buildings are approximately 50 percent full with room for additional lessees. Additionally, as current leases expire and are renewed, revenues can be expected to increase to reflect rising market value rates.

Table 1: Lookout Mountain Communication Leases (T37N, R4E, Section 17)

Lessee	Lease #	Annual Rent
AT&T	52-069675	\$12,500.00
		Total: \$12,500

Table 2: South Lookout Mountain Communication Leases (T37N, R4E, Section 19)

Lessee	Lease #	Annual Rent
Tower Asset Sub	52-A69667	\$8,058.00
GTE Wireless	52-070745	\$7,000.00
US West	52-A69554	\$7,000.00
		Total: \$22,058

Table 2: Galbraith Mountain Communication Leases (T37N, R3E, Section 11)

Lessee	Contract #	Annual Rent
Washington State Patrol	52-F3842	0
Immigration Nat. Service	52-F4476	0
Wiztronics	52-35654	#3,365
US West Communications	52-47029	\$5,432
AT&T Corporation	52-72642	\$12,500
Sprint Communications Co.	52-47078	\$9073.38
Western Telecomm Inc.	52-48276	\$9,786.50
Burlington Northern Railroad	69428	\$4,873.00
		Total: \$45,029.88

Mineral Resources

Mineral resources associated with state-owned lands are divided into two groups; 1) sand, gravel and rock, and 2) metallic minerals, nonmetallic minerals, and oil and gas deposits. Mineral resource lands are managed using long-term leases, with the lessee developing the capital infrastructure for the operations and paying extraction expenses. Revenue is derived from direct sales or long-term leases with DNR receiving a Royalty@ (percent) of a product sold.

Sand, Gravel, and Rock: There are currently no sand, gravel and rock sales on DNR-managed lands within the planning area. There are no known significant deposits to anticipate future revenue.

Oil and Gas: There are nine oil and gas leases in the planning area generating an annual income of \$3,320. A statute (RCW 79.14) defines the annual rental fee for all oil and gas leases as a minimum of \$1.25/acre/year (rate set by the Board of Natural Resources). Leases are for five to ten year lease terms. There is no active drilling or exploration occurring at this time. These leased lands are being held for their potential to supply oil or gas. If oil and gas market values increase, the incentive to begin active exploration and drilling may occur on these lands. If there is any resource production from these leased lands, the DNR will receive a 12.5 % royalty for anything produced.

Other Minerals: There are no direct sales or leases for metallic or nonmetallic minerals in the planning area. The only known possible deposits within the planning area are for coal in the Blue Canyon mine area. The Blue Canyon mine was closed in 1919. Future revenue potential from coal is dependent on economics and market needs.

Special Forest Products (SFP)

Special Forest Products, often referred to as Non Timber Forest Products (NTFP), are forest products other than timber that are harvested for a variety of personal and commercial uses such as edibles, floral products, decorative items (e.g., Christmas greens), and pharmaceutical extracts (e.g., Cascara bark, Pacific Yew, St. Johns wort). The harvesting of such products began with centuries of cultural and subsistence uses by Native Americans and European immigrants, and has expanded into small and large-scale commercial production with worldwide markets. This expansion has brought thousands of new harvesters into Northwest forests from diverse ethnic backgrounds. Cultural differences, language barriers, economic competition, and possible environmental degradation by over harvesting are all issues impacting this industry.

The economically important SFPs in Western Washington are floral greens, Christmas greens, mushrooms, and medicinal plants. Floral greens include, but are not limited to, salal, evergreen huckleberry, bear grass, sword fern, Oregon grape, baby's breath and scotch broom. Overall market predictions for floral greens are for lower prices and a fairly constant demand.

Christmas greens include boughs from noble, silver, Douglas, and alpine fir, white pine, red cedar, western juniper, and Port Orford cedar. The future market for boughs should see higher prices and much greater demand. Common commercial mushrooms are Matsutake and Chanterelles, both of which require specific forest conditions to support commercial quantity levels. Market values should remain constant or increase yet, how mushroom harvesting will be commercially managed is unknown at this time. Medicinal plants include Princess pine, St. John's wort, valerian, and many more. The market for medicinal plants is expected to increase.

Three factors critical to the success of management, harvesting and marketing of commercial SFPs are: 1) **Access** necessary to remove a commercial volume of a product in an economically feasible manner, 2) **Quantity** to support an economically viable harvest operation and, 3) **Quality** products are necessary to meet commercial standards. Other related factors include: harvest site in relation to slope, product density, distance to market and road conditions, exclusive vs. non-exclusive harvest sites, and disease and insect damage.

The major SFP marketing and product processing centers in the Pacific Northwest are: 1) Mason County, WA and 2) Vancouver, B.C.. The product source for Vancouver, B.C. markets are mainly Vancouver and Gulf Islands. The ability to economically transport SFP to a viable market center is an important consideration, though smaller scale operations are scattered throughout western Washington. As demand and value increase, growing some SFPs in a farmed condition becomes a viable option. For example, Pacific yew, which provides Taxol, a compound that has been found to be effective in treating certain cancers, is now being grown on Ayew plantations (by Weyerhaeuser) because harvesting from the wild was not providing the amount demanded by the market.

DNR currently has four marketing options; 1) Leases (usually ten year terms) for exclusive harvesting rights for a specific area (average \$6/acre/year), 2) Non-exclusive permits for a specific area (\$350/permit/year), 3) Region sales (\$20,000 to \$100,000) which requires bidding, and 4) Direct sales (up to \$20,000). Annual revenue statewide averages \$400,000.

Special Forest Product specialists believe the Whatcom County area does not have the volume of high quality SFPs to support extensive commercial markets. Of the products currently commercially marketable in the planning area, only Western Red Cedar boughs have revenue potential. Revenue from cedar bough harvest could be \$6,000 to \$12,000 every 3-5 years. There is possible revenue potential from moss but much less than cedar boughs. The following provides more specific information regarding SFPs found in the Lake Whatcom Landscape planning area.

Floral Greens: Of the commonly marketed greens, salal, sword fern, and scotch broom are found in the planning area. Of these, only sword fern is in sufficient commercial quantity. There is currently a very limited and low paying market for sword fern. The florist industry prefers higher quality ferns grown in greenhouses (e.g., Aleather leaf fern).

Christmas Greens: There is a fair quantity of Western Red Cedar boughs, especially in the western portion of the planning area. The boughs need to be dark green, which occurs, in shadier stands. Cedar grown in more open, drier sites have yellow, lighter colored needles not of commercial quality. DNR could offer an exclusive permit/lease to a harvester and generate roughly \$6,000 B \$12,000 every 3-5 years (requires a Abreak@ for bough regeneration). DNR is generally paid \$0.10 B \$0.13 per pound with the harvester getting \$0.28 B \$0.30 per pound at the warehouse.

Mushrooms: Though wild edible mushrooms are known to exist in the planning area, quantities are believed to be insufficient to support commercial harvesting. DNR has offered commercial mushroom permits in other parts of the state but with limited success.

Moss: There is currently a good market for moss (used fresh or dried in floral arrangements) with some warehouses paying approx. \$1.00 per pound. While there is extensive moss in the planning area (especially the western portion), commercial quantity and quality are likely limited. Moss needs to be Aclean@ of conifer needles (i.e., growing in hardwood stands or require additional cleaning labor) and in thick clumps. Most commercially harvested moss comes from the coastal areas (e.g., near Astoria, OR).

Medicinal plants: Market potential for medicinal plants is unknown at this time, though research may result in the discovery of new potential uses. Possible conflicts with Native American traditional uses of these plants may impact any commercial harvesting. Plants commonly harvested for medicinal and spiritual reasons in the planning area are:

Transplants: While there is value and demand for native plant transplants, many of these plants are now being grown in nursery conditions. NW Region currently issues one annual permit for digging up native plants in planned timber sale and road construction areas throughout Whatcom and Skagit counties. Revenue from this permit is approx. \$1,800/year.

Potential Non-Traditional Revenue Sources:

Non-traditional revenue sources that DNR may want to consider are:

Carbon Sequestration:

The term forest Acarbon sequestration,@ also called Acarbon offset,@ refers to a forest=s ability to store carbon and counterbalance carbon dioxide emissions. Forests balance the amount of carbon dioxide (CO2) in the atmosphere because they act as Asinks,@ drawing carbon dioxide out of the atmosphere through the process of photosynthesis. They convert the carbon dioxide into substances such as carbohydrates, which provide a store of energy (i.e., leaves, branches, bark, etc.). Carbon dioxide is released back into the atmosphere when plants respire and through the process of decomposition.

Sequestering carbon and selling Acarbon credits@ could be a source of income to the trust beneficiaries. Carbon credits work by paying landowners to keep a certain amount of carbon (i.e., trees) in long-term or permanent storage. Utility companies or heavy industry can then buy those credits to offset their carbon-dioxide emissions.

The market for carbon credits is extremely speculative and in its infancy. While carbon credits are currently being bought and sold on the open market, they do not exist under federal law. These current transactions are in anticipation of possible future regulation related to carbon emissions. There is still a need for internationally recognized methodologies to calculate and monitor carbon values associated with forest management.

In addition to a credible and thorough carbon accounting system, issues such as Aleakage@ (unexpected carbon losses from fire, extreme weather, etc.) and Aadditionality@ needs to be resolved. AAdditionality@ is the idea that carbon credits should only be given for forest management activities that are in addition to what is already occurring due to regulatory requirements and other efforts (e.g., DNR would not get credits for areas already protected under the HCP). The value of carbon credits is not expected to replace the value of timber harvesting but could assist in management costs and provide some revenue compensation while providing ecological and community benefits.

Producing revenue through carbon sequestration is an emerging field being discussed nationally and internationally. Key questions and protocol need answering prior to utilization on state trust lands.

Recreational Use Fee:

DNR has explored the idea of charging recreational use fees for many years. Two significant impediments to this idea include the cost of collecting and processing fees and potential liability issues. If the department charges fees for access or recreational use of trust lands, it loses recreational immunity as defined in the recreational use statute, RCW 4.24.210. The cost of maintaining state lands and roads to a standard that limits liability to lawsuits is extensive. Several recent court cases have found public entities liable for injuries or damages because the areas for which they charged fees were not maintained to a safe standard. Settlement and legal costs for these lawsuits have been significant. The cost of collecting and processing recreation user fees, combined with the greater liability, generally surpasses the revenue gained from charging for recreational uses. Proximity to large population centers and areas with unique attributes are necessary to draw users away from non-fee areas. Possible use of "user groups" to assist in collecting fees could help but, the liability issue remains.